

Claims

1. A rotary dry vacuum pump with a rotary rotor comprising:

one or plural rotors housed within a housing;

bearings for supporting respectively shafts of the

5 rotors;

a suction port and an exhaust port respectively formed in the housing for sucking and exhausting fluid; and,

10 a motor for driving and rotating at least one of the rotors,

wherein the motor includes a stator core,

15 a partition wall mounted on an inner peripheral side of the stator core is fixedly secured to the housing to thereby hermetically seal an interior of the partition wall, a rotary element is rotatably disposed within the partition wall, the shaft of at least one of the rotors and shaft of the rotary element are fixedly secured to thereby be able to drive and rotate the rotor, and a gas charge hole is provided for charging 20 purge gas into the partition wall.

25 2. A rotary dry vacuum pump as set forth in Claim 1, wherein the shaft of the motor and the shaft of the rotor are formed integral with each other.

3. A rotary dry vacuum pump as set forth in Claims 1 and 25 2, wherein the motor is disposed on a suction port side of the

vacuum pump.

4. A rotary dry vacuum pump as set forth in Claims 1 to 3, wherein flow rate control means is disposed on a pipe for
5 sending the purge gas to the purge gas charge hole.

5. A rotary dry vacuum pump as set forth in Claims 1 to 4, further including a pressure measuring device for measuring the pressure of the interior of the partition wall and/or a
10 pressure measuring device for measuring the pressure of the interior of an exhaust chamber.

6. A rotary dry vacuum pump as set forth in Claims 1 to 4, further including a measuring device for measuring the number
15 of rotations of the rotary element of the motor and the rotor.

7. A rotary dry vacuum pump as set forth in Claims 1 to 4 or in Claim 6, further including means for measuring the power consumption of the motor.

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8. A rotary dry vacuum pump as set forth in Claims 1 to 4, wherein a gas flow meter is disposed in the vicinity of the suction port or exhaust port or within a vacuum chamber.